

REMARKS

This is in full and timely response to the above-identified Office Action. The above listing of the claims replaces all prior versions, and listings, of claims in the application. Reexamination and reconsideration in light of the proposed amendments and the following remarks are respectfully requested.

IDS/Reference Listing

The references listed in the specification have been previously listed and submitted in IDS form.

Drawings

In this response, the drawings are left unamended. Instead, claim 6 has been broadened by the deletion of the reference to “boats” and “busses” .

It is also submitted that the movable and selectively positionable connection device of claim 12, is in fact illustrated – see element 300 in Fig. 3 and the disclosure carried in paragraph [0025].

The Specification

In this response, it is proposed to submit a substitute specification wherein appropriate amendments have been made to remove the use of the term “contrail.” The substitute specification also contains amendments which overcome the other objections which have been raised in paragraph #3 of this Office Action. The title of the invention has been changed to overcome the objection raised in paragraph #4 of this action.

Claim Amendments

In this response, the claims have been amended to obviate the shortcomings noted by the Examiner in paragraph #5 of this office action. The amendments additionally overcome the rejections under 35 USC § 112, second paragraph. The use of the term “etc.” “boats” and “busses” have been removed. The antecedent basis problems listed in connection with claims 14 and 15, are overcome by the amendment which makes claims 14 dependent on claim 13.

In addition, the independent claims have also been amended to call for the platforms to be constructed in such a manner that laterally opposed pairs of adjustable length pillars each have a laterally extending upper cross-member interconnecting upper ends thereof, whereby each laterally extending upper cross-member is respectively movable with the upper ends of the laterally opposed pair of adjustable length pillars when the laterally opposed pair of adjustable length pillars are adjusted in length. In addition, the amendments call for the shipping platform to be configured such that spaces between the laterally extending upper cross members and the platform are open and free of structure that impedes passage of cargo between the pairs of laterally opposed adjustable length pillars onto the platform.

Rejections under 35 USC § 102

The rejections of claims 1-3, 5-7 and 9-12 under 35 USC § 102(b) as being anticipated by Betjemann; and the rejection of claims 1-10 under 35 USC § 102(b) as being anticipated by Glassmeyer, are respectively traversed.

Betjemann and Glassmeyer disclose arrangements which have cross-members/braces between the deck and the structure that is being read as being the claimed upper cross-members, thus distinguishing over the arrangement as now claimed wherein the spaces between the deck and the upper cross member are required to be open and free of structure. The claims as amended also distinguish over the arrangement of Betjemann wherein the members, which are taken to be the claimed cross-members, that is to say elements 27, 28 and 30 (element 29 does not appear to

be illustrated or the appropriate element designated with the numeral 29) are not arranged to be raised and lowered with the extension/retraction of the structures which are being read as the adjustable length pillars – see Figs. 4 and 5 of Betjemann.

It is respectfully submitted that the arrangements which are disclosed in Betjemann and Glassmeyer cannot meet the claimed requirements and therefore do not anticipate the claimed subject matter.

Rejections under 35 USC § 103

The rejection of claim 4 under 35 USC § 103(a) as being unpatentable over Betjemann further in view of Sain, is submitted as being rendered moot by the amendments to claim 1 which obviate the anticipation rejection.

The rejection of claims 13-16 under 35 USC § 103(a) as being unpatentable over Glassmeyer in view of Sain is respectfully traversed. Claim 13 has been amended to define a structure which is neither disclosed nor suggested by Glassmeyer. The teachings of Sain do not contain any suggestion which would lead the hypothetical person of ordinary skill to consider a modification of the Glassmeyer arrangement. Thus, the references cited in this rejection cannot be relied upon to establish a *prima facie* case of obviousness for at least this reason.

Newly presented Claims

New claims 17-20 are presented for examination. Claims 17 - 19 depend from claim 1 while claims 20 and 21 depend from claim 13. Support for these claims is found in the at least the drawings – see Figs. 1-3 and 5 for example. These claims are patentable over the art in that they contain subject matter which is neither disclosed nor suggested by the cited references.

Conclusion

It is respectfully submitted that the claims as amended and newly presented distinguish over the cited references and that the application now stands in condition for allowance. Favorable consideration and allowance is therefore courteously solicited.

Respectfully submitted,

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Title:

CONTRAIL SHIPPING PLATFORM

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates generally to a shipping platform for transport on container ships and the like, and more specifically to an open shipping platform for transporting large vehicles and the like type of cargo and which is adjustable with respect to adjacent containers so as to enable containers to be disposed on top thereof.

Description of the Related Art

[0002] Open shipping platforms, which have been used to transport vehicles or the like, have had to be left to last and placed on top of the uppermost containers of the containers stacked into the holds and decks of container ships.

SUMMARY OF THE INVENTION

[0003] A first aspect of the invention resides in a shipping platform—~~or~~ ~~contrail~~ comprising: a platform; and adjustable length pillars provided at either side and at both ends of the platform, the adjustable length pillars each having an upper cross-member interconnecting the upper ends thereof.

[0004] This platform is also provided with underside cross-members which are rigidly connected with the platform and which extend parallel with the upper cross-members. The upper and lower cross-members are provided with openings by which the upper and lower cross-members are engageable with side-by-side connection rails or beams used to interconnect containers.

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[0005] The upper and lower cross-members are provided with apertures which are so sized and located as to allow releasable interconnection with the connection rails they are engageable with. Further, the adjustable length pillars each comprise a base member rigidly connected with the platform and a telescopic member which is slidably disposed with the base member. The upper cross-members interconnect upper ends of a pair of telescopic members.

[0006] The adjustable length pillars each further comprise a locking device which selectively locks the telescopic member in one of a plurality of positions relative to the base member. Each locking device comprises a locking pin which is disposed through apertures which are formed in the telescopic member and the base member of the adjustable length pillars.

[0007] A second aspect of the invention resides in a shipping platform arrangement comprising: a shipping platform comprising: a platform; and adjustable length pillars provided at either side and at both ends of the platform, the adjustable length pillars each having an upper cross-member interconnecting the upper ends thereof; and first connection rails which are disposed over and connectable to the upper cross-members, the first connection rails being also connectable to at least one container which is disposed adjacent the shipping platform.

[0008] In this arrangement, the shipping platform also has lower cross-members fixed to a lower side thereof, the lower cross-members being parallel to the upper cross-members. In addition, first connection devices are used to interconnect the connection rail to the upper cross-member and to an upper side of the at least one adjacent container.

[0009] Second connection rails are also disposed under the lower cross-members and interconnected thereto by second connection devices which connect the second connection rails to lower sides of the at least one

adjacent container. In accordance with this aspect of the invention the first and second connection devices comprise twist locks.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The various aspects and advantages of the embodiment of the present invention will become more clearly appreciated as a description thereof is given with reference to the appended drawings in which:

[0011] Fig. 1 is a perspective view of an embodiment of the shipping platform according to the present invention, showing its disposition with a plurality of containers in a situation wherein a further container or containers can be disposed on top thereof;

[0012] Fig. 2 is a perspective view similar to that shown in Fig. 1 depicting the arrangement wherein two shipping platforms are arranged one on top of the other;

[0013] Fig. 3 is perspective view an embodiment of the shipping platform;

[0014] Fig. 4 is an end elevation of the platform showing the manner in which the platform can be connected with connection rails or beams in the manner depicted in Fig. 1;

[0015] Fig. 5 is a side elevation of the shipping platform embodiment; and

[0016] Fig. 6 is an end view showing the support posts of the shipping platform reduced to a minimum height.

DETAILED DESCRIPTION OF THE EXEMPLARY EMBODIMENTS

[0017] Figs. 1-6 show an embodiment of a shipping platform 100 according the present invention. In this arrangement, as best seen in Fig. 3, a basic platform comprises an I-beam chassis 102 with a planked floor 104

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supported thereon. The planking can be either metal or wood. Pairs of pillars or masts 106 are arranged proximate each end of the platform chassis 102. The lower ends of these pillars 106 are secured to the outer sides of side I-beams 108 which form part of the I-beam chassis 102. These pillars 106 are braced in position by angled reinforcing members 110 which, in this embodiment, extend at angles between the pillars and the upper edges of the side I-beams 108 and which are securely welded in position.

[0018] Each of the pillars 106 are telescopic so that the height of each of the I-beam upper cross-members 112 which interconnect the upper ends of each end of the telescopic portion 106A with each of the base members 106B of the pillars 106, can be adjusted to and locked in a selected one of a predetermined number of positions. These positions are selected with respect to the heights of the different types of containers beside which the embodiments of the shipping platforms 100 can be disposed.

[0019] In the illustrated embodiment, the interlocking of the telescopic members 106A with the base member 106B of the pillars 106 is achieved using locking pins 114 and a series of apertures formed in each of the stationary base and telescopic upper ends 106B, 106A of the pillars. Once the upper ends 106A are in the required relative positional relationship with respect the base members 106B, a locking pin 114 can be inserted through each set of mating apertures to lock the pillars in the desired condition. The locking pins 114 may take the form of bolts so that a nut can be placed on the ends to ensure that vibration and the like does not induce any undesirable movement or disengagement of the pins. Alternatively, the pins 114 may be smooth and can be provided with some other suitable form of securing arrangement such as cross pins or the like to prevent unwanted movement during shipping.

[0020] As noted above, the pillars 106 can be set to a plurality of different heights. These heights are selected to correspond to the heights of

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differently sized containers and further to a fully collapsed position which facilitates storage when not in actual use (see Fig. 6).

[0021] A fully extended position or maximum height of the pillars 106 is selected to be higher than the tallest conventional closed type containers. An example of this setting is shown in Fig. 2, wherein shipping platform 100-1 is disposed atop of platform 100-2 and wherein the pillars 106 of the upper shipping platform 100-1 are set at their maximum height.

[0022] This maximum height setting can be used to facilitate location and engagement with a lifting apparatus such as a spreader when the platform is placed on the very top of the container stack such as illustrated in Fig. 2.

[0023] The upper cross-members 112 are formed with apertures 112A into which twist locks associated with the connection rails or beams 200, can be disposed and engaged with the cross-members when the connection rails 200 are placed in position in the manner illustrated in Figs 2-4.

[0024] Lower cross-members 116 extend across the lower surface of the shipping platform 100 at locations inboard of end I-beams 118 provided at the ends of the platform 100. These lower cross-members 116 are, as best seen in Figs. 3-4 and 6, provided with apertures into which twist locks can be disposed. These lower cross-members 118 are, like the remainder of the platform chassis 102, formed of I-beam and are securely welded to the side beams 108 of the platform chassis 102.

[0025] An adjustable member 300 for facilitating "tie-down" of vehicles and the like is provided in the floor 104 at one end of the shipping platform. This device can, of course, be omitted or replaced with other members which facilitate the securing of tie-down cables/chains or the like. Alternatively, two or more of these devices can be disposed on the floor 104 as desired.

[0026] The above-described shipping platform is adjustable and dispositionable in the manner depicted in Figs. 1 and 2. As shown in Fig. 1,

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a shipping platform 100 according to an embodiment of the invention is disposed atop a container C1 and adjacent two other containers C2, C3 by way of two connection rails 200. As shown, the connection rails 200 extend between the shipping platforms 100-1 and 100-2 in manner which allows twist locks 210 to interconnect the two, and then extends over the new two containers (including container C1) and further over the upper cross-member 112 of the shipping platform disposed immediately beside containers C2 and C3.

[0027] These connection rails 200 are connectable to containers on either side of the shipping platform 100 in the manner illustrated in Fig. 4. This type of connection permits a fully-loaded, closed-type container to be disposed directly on top of the shipping platform 100 once a ~~central~~connection rail 200 has been disposed over and connected to each of the upper cross-members 112, inasmuch as the load is now shared by the connection rails 200 and the adjacent containers.

[0028] As will be appreciated, the embodiments of shipping platforms 100 according to the invention are able to behave spatially, as if they were normal closed containers and thus be disposed anywhere in the container stack via the use of the connection rails. The utility of this arrangement will be immediately appreciated by those involved with container loading and unloading and how this alleviates the need to previously schedule the loading to avoid loss of cargo carrying capacity.

[0029] The content of United States Patent No. 6,533,510 is hereby incorporated by reference. This patent which was issued on March 18, 2003 in the name of Sain, and discloses a trailer system and the use of stacking devices which facilitate side-by-side stacking of containers.

[0030] For further disclosure relating to structures pertinent to the beams or connection rails 200, reference may be had to United States Patent No. 6,027,291 issued on Feb. 22, 2000 in the name of Sain et al.

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[0031] Twist lock devices are well known in the art to which this invention is applicable. For further disclosure relating to these devices reference may be had to United States Patent No. 6,460,227 issued in the name of Hove on October 8, 2002, or United States Patent No. 6,390,743 issued to Metternich on May 21, 2002. The content of these patents is hereby incorporated by reference.

[0032] While the invention has been disclosed with reference to a limited number of embodiments, the various modifications and variations which can be made without departing from the scope of the invention, which is limited only by the appended claims, will be self-evident to those skilled in the art of container construction and shipping.